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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,191	06/21/2001	David F. Craddock	AUS920010468US1	8644

35525 7590 05/12/2005

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EXAMINER	
NGUYEN, TANH Q	
ART UNIT	**PAPER NUMBER**
2182	

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/886,191	CRADDOCK ET AL.	
	Examiner	Art Unit	
	Tanh Q. Nguyen	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application:

4a) Of the above claim(s) *1-6,15-20 and 29-34* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-14, 21-28, 35-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of invention II (claims 7-14, 21-28, 35-42) in the reply filed on April 7, 2005 is acknowledged. The traversal is on the ground(s) that "Because the alleged inventions are classified in the same class and subclass, the inventions have not acquired a separate status in the art and restriction is not proper. Certainly, a competent search of invention I would encompass the subject matter of invention II. Similarly, a competent search of invention II would encompass the subject matter of invention I. Thus, examining both alleged inventions would not appear to present an undue burden on the Examiner".

"Because the alleged inventions are classified in the same class and subclass, the inventions have not acquired a separate status in the art and restriction is not proper" is not found persuasive because the examiner did not contend that the inventions have acquired a separate status in the art by separate classification. Rather, the restriction for examination purposes is proper because the search required for Group I is not required for Group II, and because the inventions have acquired a separate status in the art because of their recognized divergent subject matter. Furthermore, the fields of search do not dictate the restriction requirement, and the areas classified for the claimed invention would not normally be the only areas of search.

"Certainly, a competent search of invention I would encompass the subject matter of invention II. Similarly, a competent search of invention II would encompass

the subject matter of invention I" is not found persuasive because the argument is merely based on applicant's opinions, not facts.

"Thus, examining both alleged inventions would not appear to present an undue burden on the Examiner" is not found persuasive because the burden in the examination of multiple inventions lies in the consideration of the patentably distinct multiple inventions in one application, not just the field of search.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-6, 15-20, 29-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 7-13, 21-27, 35-41 are rejected under 35 U.S.C. 102(e) as being anticipated by **Pettey et al. (USP 6,594,712)**.

6. As per claims 35-41, **Pettey** teaches a data processing system [100, FIG. 1] comprising:

a bus system [216, FIG. 2];

a processing unit [208, FIG. 2] connected to the bus system, wherein the processing unit includes at least one processor;

a first memory [218, FIG. 2];

a target channel adapter [202, FIG. 2] in connection with a system area network [114, FIGs. 1-2]; and

a set of instructions in the first memory [col. 7, lines 16-17], wherein the processing unit executes the set of instructions to perform the acts of:

receiving a request message [SEND packet 1000, FIG. 10] from a host with the target channel adapter [col. 15, lines 7-9; col. 15, lines 19-22: HCA (host channel adapter) transmitting a SEND packet to the TCA (target channel adapter), hence the TCA receiving the request message from the host]; and

performing a remote direct memory access transfer [RDMA write: col. 15, lines 12-16; RDMA Read: col. 15, lines 22-31] with the host through the system area network.

Pettey further teaches the remote direct memory access including reading a

second memory [124, FIG. 1] from the host; the processing unit writing data read from the second memory to a storage device [112, FIG. 1; FIG. 16; col. 15, lines 22-31; FIGs. 12-13; col. 13, line 45-col. 14, line 9; FIG. 22b; col. 6, lines 45-50];

the remote direct memory access including writing to a second memory [124, FIG. 1] of the host; the processing unit reading from a storage device [112, FIG. 1] data to be written to the second memory [FIG. 15; col. 15, lines 9-16; FIG. 11; col. 13, lines 18-44; FIG. 18b; col. 6, lines 45-50];

the request message including remote direct memory access transfer parameters; the remote direct memory access transfer parameters including at least one of a transaction ID, a list of data segments, an identification of a storage device, and an address on a storage device [FIGs. 10-13; col. 12, line 57-col. 14, line 9].

7. As per claims 7-13, 21-27, Pettey teaches the data processing system above with a set of instructions for receiving a request message from the host with the target channel adapter, and performing a remote direct memory access transfer with the host through the system area network - hence teaches

a method, operable in a data processing system having an adapter, for performing an input/output transaction, comprising receiving a request message from a host, and performing a remote direct memory access transfer with the host through a system area network; and

a computer program product in a computer readable medium for execution in a data processing system having an adapter, comprising receiving a request message

from a host, and performing a remote direct memory access transfer with the host through a system area network.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 14, 28, 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Pettey et al.** in view of **Avery (USP 6,813,653)**.

Pettey disclosed the invention except for the processing unit sending a confirmatory response to the host.

Avery teaches a DMA scoreboard tracking the completion of DMA writes and

reads by monitoring acknowledgements received from DMA writes and data tags received from DMA read responses [col. 10, lines 54-65] being associated with RDMA operations [col. 11, lines 10-21], and specifically teaches a destination receiving a packet, the destination having a destination transport engine creating an acknowledgement message and sending the acknowledgement message to the source in RDMA operations [col. 6, line 47-col. 7, line 5].

It would have been obvious to one of ordinary skill in the art at the time the invention was made, to send a confirmatory response to the host (e.g. an acknowledgement message as is taught by Avery) for the purpose of providing the capability to track completion of the RDMA operations.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 7-14, 21-28, 35-42 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-14,

21-28, 35-42 of **copending Application No. 09/886,193** in view of **Pettey**. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Copending Application No. 09/886,193 teaches, in claims 7-14, 21-28, 35-42 all the limitations of claims 7-14, 21-28, 35-42 of the current application except for specifically teaching performing a remote direct memory access transfer with the host through a system area network. In particular, claims 7, 21, 35 of copending Application No. 09/886,193 teaches receiving a request message from a host (e.g. lines 3-6 of claim 7 of copending Application No. 09/886,193: receiving over a network an address of a request from a host, and retrieving over the network the request - hence receiving the request message from the host, as a result of the retrieval), and performing a remote direct memory access transfer with the host (e.g. lines 7-8 of claim 7 of copending Application No. 09/886,193).

Pettey teaches performing a remote direct memory access transfer with the host through a system area network. It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform a remote direct memory access transfer with the host through a system area network, as is taught by Pettey, for the purpose of allowing the claimed invention to be practiced in a system area network environment.

13. Claims 7-14, 21-28, 35-42 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-14, 21-28, 35-42 of **copending Application No. 09/961,952**. This is a provisional

obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 7-14, 21-28, 35-42 of **copending Application No. 09/961,952** contain every limitation of claims 7-14, 21-28, 35-42 of the current application, and as such anticipate claims 7-14, 21-28, 35-42 of the current application.

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). " ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Beukema et al. (USP 6,578,122)

Pfister et al. (USP 6,851,059)

Biran et al. (USP 6,658,521)

Beukama et al. (Pub No. US 2002/0073257 A1)

These references have a common assignee with the instant application.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanh Quang Nguyen whose telephone number is (571) 272-4154 and whose e-mail address is tanh.nguyen36@uspto.gov. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached on (571) 272-2100. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 for After Final, Official, and Customer Services, or (571) 273-4154 for Draft to the Examiner (please label "PROPOSED" or "DRAFT").

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05/03/2005

TQN
May 3, 2005